

ABSTRACT

The present invention provides an improved write circuit and method for writing a programmable conductor random access memory (PCRAM) cell. The method comprises precharging a bit line to a first voltage and applying a second voltage to a first terminal of a chalcogenide memory element. A second terminal of the chalcogenide memory element is selectively coupled to the bit line to produce a voltage across the memory element sufficient to write a predetermined resistance state into the element. The first voltage may take on two different values to program two different resistance states into the memory element.